

REMARKS

Applicants submit the following remarks in support of the patentability of the present invention over the disclosures of the references relied upon by the Examiner in rejecting the claims. Further and favorable reconsideration is respectfully requested in view of these remarks.

Initially, claim 1 has been amended to correct a spelling error.

Attached hereto is a marked-up version of the changes made to claim1 by the current amendment. The attached page is captioned "Version with markings to show changes made."

New claims 4-35 have been added to the application.

New claim 4 corresponds to original claim 1, except that it excludes tantalum from the metal. In this regard, a tantalum mask is used in the dry etching method claimed in the Hattori reference cited in Applicants' IDS submitted concurrently herewith, and Hattori also claims a dry etching mask made of a tantalum or a tantalum nitride.

Applicants take the position that since tantalum is one of the metals specifically disclosed in the present application, its exclusion from new claim 4 does not raise any question as to whether or not the subject matter of claim 4 is described in the specification.

New claim 5 corresponds to original claim 3.

New claims 6-35 correspond to original claims 1-3, except that they are directed to methods for producing a TMR element, a magnetic device and a MRAM using a TMR structure. In this regard, please see the disclosure on pages 1-2 of the specification, as well as the description in the EXAMPLES beginning on page 11.

The rejection of claims 1-3 under 35 U.S.C. §102(b) as being anticipated by Harkin et al. is respectfully traversed.

The inorganic masking pattern 21 of tantalum or tungsten disclosed in this reference and specifically mentioned by the Examiner, is clearly different from the mask of the present invention.

More specifically, in Harkin et al., during laser annealing, the portion at which crystallization is not desired is masked by the inorganic material which can reflect a laser beam and/or absorb the laser beam. That is to say, inorganic masking pattern 21 works to prevent laser energy applied on the inorganic masking pattern 21 from reaching to the underlayer which is masked by the inorganic

masking pattern 21. So that, in Harkin et al., during laser annealing, none of the material is removed by the laser beam from the portion on which the laser beam is applied.

On the other hand, in the present invention, the portion at which the etching is not desired is masked by the mask, and the material masked by the mask is prevented from being removed by chemical and physical actions.

For these reasons, Applicants take the position that the subject matter of claims 1-3 is patentable over the Harkin et al. reference.

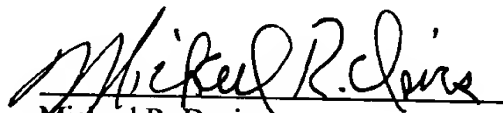
Applicants also take the position that the subject matter of new claims 4-35 is not suggested by the Harkin et al. reference.

Therefore, in view of the foregoing amendments and remarks, it is submitted that each of the grounds of rejection set forth by the Examiner has been overcome, and that the application is in condition for allowance. Such allowance is solicited.

Respectfully submitted,

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What is claimed is:

1. ^(Amended) A masking material for dry etching of a magnetic material by using a mixed gas of carbon monoxide and a nitrogenous compound as etching gas, which comprises a metal having a specific physical property that its melting or boiling point, when it is converted into a nitride or carbide is higher than that of in the form of single metal^a.
2. The masking material for dry etching according to claim 1, wherein the metal is tantalum.
3. The masking material for dry etching according to claim 1, wherein the metal is tungsten, zirconium or hafnium.